Amendments to Claims

1–6. (canceled)

7. (new): A method of manufacturing a semiconductor circuit on a substrate, comprising the steps of:

providing first and second substrate handling robots;

coupling a first process chamber to the first robot so that the first robot can transfer a substrate into and out of the first process chamber, wherein the first process chamber is a deposition chamber or a plasma chamber, and wherein the first process chamber is not coupled to the second robot;

coupling a second process chamber to the second robot so that the second robot can transfer a substrate into and out of the second process chamber, wherein the second process chamber is a deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to the first robot;

coupling one or more pass-through chambers to both the first robot and the second robot so that both the first robot and the second robot can transfer a substrate into and out of each of the pass-through chambers, wherein said one or more pass-through chambers include a first pass-through chamber; and

subsequently performing the sequential steps of:

the first robot transferring a first substrate into the first pass-through chamber;

heating said first substrate within the first pass-through chamber; and

the second robot removing said first substrate from the first pass-through chamber.

8. (new): A method according to claim 7, further comprising the subsequent step of:

the second robot transferring said first substrate to the second process chamber.

9. (new): A method according to claim 8, further comprising the subsequent sequential steps of:

the second robot removing said first substrate from the second process chamber;

the second robot transferring said first substrate into one of the pass-through chambers;

the first robot removing said first substrate from said one pass-through chamber; and

the first robot transferring said first substrate to the first process chamber.

10. (new): A method according to claim 9, wherein said one pass-through chamber is the first pass-through chamber.

11. (new): A method according to claim 9, further comprising the steps of:

after the step of the second robot transferring said first substrate to the second process chamber, depositing tantalum or tantalum nitride on the substrate within the second process chamber; and

after the step of the first robot transferring said first substrate to the first process chamber, depositing copper on the substrate within the first process chamber.

12. (new): A method according to claim 9, further comprising the steps of:

after the step of the second robot transferring said first substrate to the second process chamber, removing native oxide from the surface of the substrate within the second process chamber; and

after the step of the first robot transferring said first substrate to the first process chamber, depositing copper on the substrate within the first process chamber.

13. (new): A method according to claim 12, further comprising the steps of:

coupling a third process chamber to the second robot so that the second robot can transfer a substrate into and out of the third process chamber, wherein the third process chamber is not coupled to the first robot;

after the step of removing native oxide and before the step of the second robot transferring the first substrate into one of the pass-through chambers, performing the sequential steps of:

the second robot removing the first substrate from the second process chamber;

the second robot transferring the first substrate into the third process chamber; and

within the third process chamber, depositing tantalum or tantalum nitride on the first substrate.

14. (new): A method according to claim 7, further comprising the steps of:

coupling a loadlock chamber to one of said first and second robots so that said one robot can transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled

to the other one of said first and second robots; and

before the step of the first robot transferring said first substrate into the first pass-through chamber, said one robot removing said first substrate from the loadlock chamber.

15. (new): A method according to claim 7, further comprising the steps of:

coupling a loadlock chamber to one of said first and second robots so that said one robot can transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the other one of said first and second robots; and

after the step of the second robot removing said first substrate from the first pass-through chamber, said one robot transferring said first substrate into the loadlock chamber.

16. (new): A method according to claim 7, further comprising the steps of:

coupling a loadlock chamber to the first robot so that the first robot can transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the second robot; and

before the step of the first robot transferring said first substrate into the first pass-through chamber, the first robot removing said first substrate from the loadlock chamber.

17. (new): A method according to claim 8, further comprising the steps of:

coupling a loadlock chamber to the first robot so that the first robot can transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the second robot; and

after the step of the second robot transferring said first substrate to the second process chamber, the subsequent steps of:

the second robot transferring said first substrate into one of the pass-through chambers;

the first robot removing said first substrate from said one pass-through chamber; and

the first robot transferring said first substrate into the loadlock chamber.

18. (new): A method according to claim 7, further comprising the step of:

providing a resistive heater within the pass-through chamber;

wherein the heating step comprises the step of said resistive heater heating said first substrate within the pass-through chamber.

19. (new): A method according to claim 7,wherein the heating step comprises the step of:

directing infrared radiation so as to heat said first substrate within the pass-through chamber.

20. (new): A method of depositing a copper layer on a substrate, comprising the steps of:

providing first and second substrate handling robots;

coupling a first process chamber to the first robot so that the first robot can transfer a substrate into and out of the first process chamber, wherein the first process chamber is a deposition chamber or a plasma chamber, and wherein the first process chamber is not coupled to the second robot;

coupling a second process chamber to the second robot so that the second robot can transfer a substrate into and out of the second process chamber, wherein the second process chamber is a deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to the first robot;

coupling one or more pass-through chambers to both the first robot and the second robot so that both the first robot and the second robot can transfer a substrate into and out of each of the pass-through chambers, wherein said one or more pass-through chambers include a first pass-through chamber; and

subsequently performing the sequential steps of:

the first robot transferring a first substrate into the first pass-through chamber;

heating said first substrate within the first pass-through chamber;

the second robot removing said first substrate from the first pass-through chamber;

the second robot transferring said first substrate to the second process chamber;

within the second process chamber, depositing tantalum or tantalum nitride on the substrate;

the second robot transferring said first substrate into one of the pass-through chambers;

the first robot removing said first substrate from said one pass-through chamber;

the first robot transferring said first substrate into the first process chamber; and

within the first process chamber, depositing copper on the substrate.

21. (new): A method of depositing a copper layer on a substrate, comprising the steps of:

providing first and second substrate handling robots;

coupling a first process chamber to the first robot so that the first robot can transfer a substrate

into and out of the first process chamber, wherein the first process chamber is a deposition chamber or a plasma chamber, and wherein the first process chamber is not coupled to the second robot;

coupling a second process chamber to the second robot so that the second robot can transfer a substrate into and out of the second process chamber, wherein the second process chamber is a deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to the first robot;

coupling one or more pass-through chambers to both the first robot and the second robot so that both the first robot and the second robot can transfer a substrate into and out of each of the pass-through chambers, wherein said one or more pass-through chambers include a first pass-through chamber; and

subsequently performing the sequential steps of:

the first robot transferring a first substrate into the first pass-through chamber;

heating said first substrate within the first pass-through chamber;

the second robot removing said first substrate from the first pass-through chamber;

the second robot transferring said first substrate to the second process chamber;

within the second process chamber, removing native oxide from the surface of the substrate;

the second robot transferring said first substrate into one of the pass-through chambers;

the first robot removing said first substrate from said one pass-through chamber;

the first robot transferring said first substrate into the first process chamber; and

within the first process chamber, depositing copper on the substrate.

22. (new): A method according to claim 21, further comprising the steps of:

coupling a third process chamber to the second robot so that the second robot can transfer a substrate into and out of the third process chamber, wherein the third process chamber is not coupled to the first robot; and

after the step of removing native oxide and before the step of the second robot transferring the first substrate into one of the pass-through chambers, performing the sequential steps of:

the second robot removing the first substrate from the second process chamber;

the second robot transferring the first substrate into the third process chamber; and

within the third process chamber, depositing tantalum or tantalum nitride on the first substrate.